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Transportation Security Administration

Technology

TSA identifies emerging technologies in order to stay ahead of evolving threats. TSA uses state-of-the art technologies to effectively screen passengers, checked baggage and air cargo.

Passenger Screening

TSA uses a number of sophisticated technologies to conduct passenger screening at the security checkpoint including:

TSA currently uses millimeter wave **advanced imaging technology** to safely screen passengers for metallic and nonmetallic threats, including weapons and explosives, which may be concealed under clothing without physical contact. There are 740 units are deployed at nearly 160 airports nationwide. Advanced imaging technology screening is optional for all passengers and meets national health and safety standards.

Advanced technology x-ray is used to screen carry-on baggage for explosives and prohibited items at checkpoints.

TSA also uses **explosives trace detection** technology to screen passengers and their belongings for trace amounts of explosive residue. Officers may swab a piece of carry-on or checked baggage or a passenger's hands and then place the swab inside the detection unit to analyze it for the presence of potential explosive residue.

Bottled liquid scanners are used at airport checkpoints to differentiate liquid explosives from common, benign liquids and are used primarily to screen medically necessary liquids in quantities larger than 3.4 ounces.

Checked Baggage

Explosives trace detection technology is also used in the baggage screening environment, and in some airports it is coupled with the use of explosives detection systems. These units use sophisticated technology to screen each checked bag instantly for potential explosives and in some airports are networked together into an in-line baggage handling system, which streamlines the baggage screening process.

In-line baggage systems use automated explosives detection systems to quickly and efficiently screen checked baggage EDS technology uses computed tomography imaging to quickly capture an image of a single bag to ensure it does not contain a threat item. These systems use a conveyor belt infrastructure to automatically screen, sort and track baggage. Multiple EDS machines are linked to a centralized control room and resolution rooms where security officers resolve anomalies identified by the system.

Air Cargo Screening

Air cargo is currently more secure than it has ever been with 100 percent of cargo on flights departing U.S. airports and 100 percent of identified high risk international cargo undergoing screening. TSA regulates use of air cargo screening technologies through an approved technology list. Airlines and other TSA-certified entities perform cargo screening activities and purchase their own screening technology from the list. All devices on the list have been tested, evaluated and qualified by TSA.